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|--|-------------|----------------------|---------------------|------------------|
| 10/505,166   | 06/27/2005  | Michel Droux         | 26209               | 6678             |
| 22889  | 7590        | 12/09/2009           |                     |                  |
| OWENS CORNING<br>2790 COLUMBUS ROAD<br>GRANVILLE, OH 43023 |             |                      | EXAMINER            |                  |
|  |             |                      | COLE, ELIZABETH M   |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1794                |                  |
|  |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|  |             |                      | 12/09/2009          | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USIPDEPT@owenscorning.com

# Office Action Summary

**Application No.**

10/505,166

**Applicant(s)**

DROUX, MICHEL

**Examiner**

Elizabeth M. Cole

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7, 10-11, 15-16, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaa et al, U.S. Patent No. 4,810,576 in view of Weeks, U.S. Patent No. 5,436,980. Gaa et al discloses a method of making a chopped strand mat comprising the step of dispersing, in a white water, chopped strands that are dried after sizing with a sizing liquid comprising an organosilane and a film former, (see col. 9, lines 17-29, col 12, lines 12-17, col. 7, lines 51-52), forming a wet by passing the dispersion over a forming wire, col. 15, lines 16-26, applying a binder and then heat-treating. See col. 13, lines 1-145, col. 4, lines 60-64. With regard to claims 2 and 3, the dried strands include less than 0.01 to 1.5 wt percent of the aqueous treating composition. See claim 19. With regard to claim 5, the fibers can have a length of anywhere from about 1.59 mm to about 76.2 mm. See col. 11, lines 63-66. With regard to claims 6 and 7, the strands are dispersed in the white water in an amount of 0.001-5 weight percent. See col. 12, lines 17-20. With regard to claims 10-11, the mat may comprise binder in an amount of 3-45 percent by weight. See col. 13, lines 35-38. With regard to claim 15-16, the strands comprise glass. See entire document. With regard to claim 18, since the claimed range is 10-50 degrees C and since the Gaa document does not disclose heating or cooling the white water dispersion either before or after the strands are added, it is reasonable to say that the dispersion would have a temperature of about

room temperature which would be within the claimed range. With regard to the claims as amended, Gaa teaches incorporating a lubricant surfactant at col. 10, lines 41-54. With regard to the limitation that the size consists essentially of the claimed components, "For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of" for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). MPEP 2111.03 Also, If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). Therefore, the burden is on Applicant to establish what the basic and novel characteristics of the invention are and how additional components constitutes a material change in the basic and novel characteristics of the invention. With regard to the limitation that the chopped strand mat is heat treated, Gaa teaches at col.16, heating the thus formed mat in an oven which corresponds to the claimed heat treating step.

2. Gaa differs from the claimed invention because Gaa does not clearly teach applying the size to glass strands wherein a strand is an assembly of glass fibers called

a strand, although at column 5, Gaa does state that the terms strand and fibers can be used interchangeably in the reference. It is noted that the selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results, *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946). Therefore, in the absence of new or unexpected results, it would have been obvious to have either sized the fibers and then assembled them into a strand, or to have assembled the fibers into a strand and then sized them. Further, Weeks teaches that it was known in the art to form the glass filaments, assemble them and then apply the size to the assembly. See col. 4, lines 55-60. Therefore, it would have been obvious to have applied the size to the formed strands as taught by Weeks rather than prior to strand formation, in view of the fact that Weeks teaches that this method of applying the size was an alternative known method of forming a glass strand.

3. With regard to the newly added limitation that the mat comprises 80% by weight of said filaments in the form of said chopped strands, since as noted above, Weeks teaches that the size can be applied to the assembly of glass filaments instead of to the individual filaments before assembly into a strand, and since as noted above, the performing of process steps in any order is *prima facie* obvious in the absence of new or unexpected results, and since if the filaments were size in an assembly of strands instead of individually sizing the filaments, the process disclosed in the references would be the same as the as the claimed process, it would be reasonable to expect that the mat would comprise mainly chopped strands rather than individual filaments as claimed since the same process would not produce different products.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gaa in view of Weeks as applied to claims 1-3, 5-7, 10-11, 15-16, 18 above, and further in view of Vinamul 8837 product specification. Gaa discloses employing a film forming agent which may comprise a PVA polymer, but does not disclose the claimed molecular weight and solubility. Vinamul 8100 teaches that it is a film forming PVA polymer which is specially designed to be used in chopped strand mats and which has the claimed viscosity and solubility. Since Vinamul is known in the art to be useful in forming chopped strand mats, it would have been obvious to have employed it as the particular film former in Gaa based on its art recognized suitability for this purpose.

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaa in view of Weeks as applied to claims 1-3, 5-7, 10-11, 15-16, 18 above, and further in view of Dolin, U.S. Patent No. 4,526,914. Gaa differs from the claimed invention because it does not disclose the claimed viscosity, although it does disclose the use of a thickener. See col. 15, lines 16-21. Dolin teaches at col. 1, lines 45-48 that conventionally it is desired that the viscosity of white water is between 2-12 cps which corresponds to the claimed range. Therefore, it would have been obvious to one of ordinary skill in the art to have added the thickener disclosed by Gaa in amounts which produced the viscosity taught by Dolin, since these values were taught in the art as desirable and conventional in forming white water dispersants.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gaa in view of Weeks as applied to claims 1-3, 5-7, 10-11, 15-16, 18 above, and further in view of Lalwani et al, U.S. Patent No. 4,917,764. Gaa differs from the claimed invention

because it does not disclose the claimed temperature of the heat treating step. Lalwani et al teaches that such heat treating steps are conventionally performed at temperatures such as anywhere from 100-400 degrees C depending on the materials involved. See col. 4, lines 20-29. Therefore, it would have been obvious to have employed temperatures as taught by Lalwani in the invention of Gaa, since such temperatures were known to be conventionally used in the art.

7. Claims 13 -14, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaa in view of Weeks as applied to claims 1-3, 5-7, 10-11, 15-16, 18 above, and further in view of Hannes et al, U.S. Patent No. 4,112,174. Gaa differs from the claimed invention because it does not disclose claimed basis weight of the mat and does not disclose claimed number of filaments. Hannes et al disclose basis weights of 100-120 gsm as typical basis weights for such glass mats. See col. 6, lines 58-60. Hannes et al teaches that strands having 1-300 filaments are typical values for such materials. See col. 4, lines 38-40. Therefore, it would have been obvious to have employed the particular types and number of filaments and to have formed the mats to have the claimed basis weights, in view of the teaching of Hannes that such materials and weights were conventionally known and used.

8. Applicant's arguments filed 8/17/09 have been fully considered but they are not persuasive. Applicant argues that neither Gaa nor Weeks teach the claimed process because Gaa teaches that a lack of good dispersion of the glass fibers in the aqueous medium hampers the formation of a uniform mat and adversely affects the strength of the resultant sheetlike mat or end product incorporating the mat. However, as noted

above, Weeks teaches that the size can be applied to the bundled assembly of filaments formed into a strand which is the process difference from Gaa, (although as noted above, Gaa uses the terms strand and fiber interchangeably). Therefore, once the process was modified as taught by Weeks, the same process would be present as the claimed process and it is not clear how the same process would not produce the same result in terms of how much of the mat comprised chopped strands. .

9. Applicant argues that Weeks does not teach applying the size to the strand assembly so that the resulting mat comprises 80% chopped strands. However, it is not necessary that the prior art have the same reason for performing a process step.

Weeks teaches an alternative known method of sizing glass filaments, which comprises the steps of assembling the filaments into a strand and then applying the size. The use of an alternative and known order of steps to produce the glass fiber mat would have been obvious to the person of ordinary skill in the art.

10. Applicant argues that even if Gaa and Weeks were combined as proposed in the action that the product formed would not have the same percentage of chopped strands because Gaa is concerned with good dispersability of fibers. However, once the process of Gaa is modified by the teachings of Weeks, the same process as claimed would be present and therefore it is reasonable to expect that the same process would produce the same product.

11. Applicant argues that there is no teaching, suggestion or motivation for changing the order of steps of Gaa as taught by Weeks. However, Weeks teaches that an alternative and known method of sizing glass filaments for use in forming glass fiber



mats is to apply the size to the assembled strand. This teaching is relevant to the invention of Gaa which also is drawn to the method of making such mats. Weeks teaches that the alternative order of steps, wherein the size is applied to the strand rather than to the individual filaments as taught by Gaa was an alternative and known process. Once the process of Gaa was modified, the same product would have to be formed, since the process steps as claimed and those taught by Gaa would be the same. It is not necessary that there be an explicit teaching or motivation regarding the change of the order of steps of a known process, which is shown by Weeks to have been a known and equivalent means of sizing glass filaments intended for use in forming glass mats.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571)

272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794

e.m.c